

**ABSTRACT**

The present invention relates to a process for chemical recycling of PET waste that comprises, among other stages, a saponification reaction stage, wherein PET waste particles are reacted with stoichiometric or excessive amounts of a strong base metal in an alcoholic reaction media, the reaction being brought to the boiling temperature of the alcoholic reaction media, preferably at atmospheric pressure, thereby obtaining as reaction products a salt of terephthalic acid with the base metal and ethylene glycol, the latter being incorporated to the alcoholic reaction media. From this reaction it is possible to afford ethylene glycol, terephthalic acid and salts thereof, which are products with a high commercial value.